

AMENDMENT TO THE CLAIMS

The following is a detailed listing of all claims that are, or were, in the Application.

1. (Currently amended) A voltage regulator comprising:
an input terminal at which an input voltage is applied;
an output terminal at which an output voltage is provided to a load, wherein the load defines a load current;
a gate modulated diode connected between the input terminal and the output terminal, the gate modulated diode having a forward voltage drop that is controllable by a voltage signal applied to a gate of the gate modulated diode, wherein the gate modulated diode comprises a transistor operating at below gate threshold voltage;
a first operational amplifier capable of operating with a low supply voltage, the first operational amplifier operable to apply the voltage signal at the gate of the gate modulated diode to control the forward voltage drop;
wherein the output voltage is regulated to a predetermined low voltage when the load current is within an operational range for the voltage regulator.
2. (Original) The voltage regulator of claim 1 wherein the supply voltage has a value of not more than 1.2V.
3. (Original) The voltage regulator of claim 1 wherein the gate modulated diode comprises a MOSFET.
4. (Original) The voltage regulator of claim 1 wherein the supply voltage is the same as the input voltage.
5. (Original) The voltage regulator of claim 1 wherein the output voltage has a value of not more than 1.0V.

6. (Original) The voltage regulator of claim 1 comprising a second operational amplifier operable to provide a reference voltage to the first operational amplifier.

7. (Original) The voltage regulator of claim 1 comprising a resistor coupled between the input terminal and an output node of the first operational amplifier, the resistor operable to pull-up the output node of the first operational amplifier.

8. (Original) The voltage regulator of claim 1 comprising a capacitor connected to the output terminal, the capacitor operable to stabilize the output voltage.

9. (Currently amended) A voltage regulator comprising:
an input terminal to which a low source voltage can be applied;
an output terminal at which a low output voltage is provided;
a transistor operating at below gate threshold voltage and connected between the input terminal and the output terminal, the transistor having a forward voltage drop which can be changed in response to a voltage applied to a gate of the transistor; and
means connected to the gate of the transistor for controlling the forward voltage drop of the transistor so that the low voltage output is maintained at a substantially constant value, the means for controlling capable of operating with the low source voltage.

10. (Original) The voltage regulator of claim 9 wherein the low source voltage has a value of not more than 1.2V.

11. (Original) The voltage regulator of claim 9 wherein the transistor implements a gate modulated diode.

12. (Original) The voltage regulator of claim 9 wherein the transistor comprises a MOSFET.

13. (Original) The voltage regulator of claim 9 wherein the output voltage has a value of not more than 1.0V.

14. (Original) The voltage regulator of claim 9 wherein the means for controlling comprises an operational amplifier.

15. (Original) The voltage regulator of claim 9 comprising a capacitor connected to the output terminal, the capacitor operable to stabilize the output voltage.